

REMARKS

In the outstanding Office Action, the Examiner objected to the drawings for failing to show all of the features of the claimed invention; objected to the claims for failing to include claim 16; rejected claims 1-5, 7-10 and 17-20 under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent Application Publication No. 2004/0036821 to Paukshto et al. ("Paukshto") in view of U.S. Patent Application Publication No. 2001/0000436 to Nose et al. ("Nose"); rejected claim 6 under 35 U.S.C. § 103(a) as being unpatentable over Paukshto in view of Nose, and further in view of U.S. Patent No. 6,245,257 to Sakai et al. ("Sakai"); rejected claims 12-14 under 35 U.S.C. § 103(a) as being unpatentable over Paukshto in view of U.S. Patent No. 4,241,984 to Leibowitz ("Leibowitz"); rejected claim 11¹ under 35 U.S.C. § 103(a) as being unpatentable over Paukshto in view of Nose, and further in view of U.S. Patent No. 5,278,009 to Iida et al. ("Iida"); and rejected claim 15 under 35 U.S.C. § 103(a) as being unpatentable over Paukshto in view of Leibowitz and further in view of Iida.

By this Amendment, Applicant adds new claim 16. Claims 1-20 are now pending.

Objections to the Drawings

The Examiner objected to the drawings under 37 CFR 1.83(a) for failing to show every feature of the invention specified in the claims. Office Action, page 2.

¹ At page 7, the Examiner indicates that claim 11 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Paukshto in view of Leibowitz and further in view of Iida. However, since claim 9, from which claim 11 depends, was rejected under 35 U.S.C. § 103(a) as being unpatentable over Paukshto in view of Nose, it is believed that the Examiner meant that claim 11 was rejected over a combination of references including Paukshto and Nose and not Leibowitz.

Specifically, the Examiner stated:

the feature of "a second polarizer between the first LC layer and the second electrode layer" found in claim 12 and the feature of "a color-filter-on-array (COA) substrate" found in claims 11 and 15, there must be shown or the feature(s) canceled from the claim(s). *Id.*

Although the Applicant does not necessarily agree with the Examiner's characterization of the specification and drawings², Applicant has attached hereto six (6) sheets of replacement drawings, corresponding to Figures 1-5B, and corresponding with the specification as originally filed. Applicant respectfully submits that the replacement drawings, particularly Figures 5A and 5B have been amended to incorporate at least a second electrode layer 590 and a COA substrate 515, thus addressing the Examiner's concerns. Accordingly, Applicant respectfully requests that the objection to the drawings be withdrawn.

Objection to the Claims

The Examiner objected to the claims for omitting claim 16. Office Action, page 3. Although Applicant does not agree with the Examiner's position that such an omission warrants an objection, Applicant has added new claim 16, to address the Examiner's concerns.

Rejections under 35 U.S.C. § 103(a)

Regarding the rejection of claims 1-15 and 17-20 under 35 U.S.C. § 103(a), Applicant respectfully disagrees with the Examiner's arguments and conclusions as set forth in the outstanding Office Action. Accordingly, Applicant respectfully traverses this

² The Office Action contains a number of statements reflecting characterizations of the related art and the claims. Regardless of whether any such statement is identified herein, Applicants decline to automatically subscribe to any statement of characterization in the Office Action.

rejection on the grounds that the Examiner has failed to establish a *prima facie* case of obviousness.

To establish a *prima facie* case of obviousness under 35 U.S.C. §103(a), each of three requirements must be met. First, the reference or references, taken alone or combined, must teach or suggest each and every element recited in the claims. M.P.E.P. §2143.03. Second, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to combine the references in a manner resulting in the claimed invention. Third, a reasonable expectation of success must exist. Moreover, each of the three requirements must “be found in the prior art, and not be based on applicant’s disclosure.” M.P.E.P. § 2143. Applicant submits that the Examiner cannot establish that the cited references teach or suggest each and every element recited in the claims or that a motivation exists to achieve the claimed combination. See M.P.E.P. §§ 2143.01 & 2143.03.

Claims 1-5 and 7-8

Claim 1 recites a combination including “during a frame time controlling light from the backlight source to pass the regions in a display time that allows the LCD to display an image; and an LCD panel.” Paukshto, whether taken alone or in combination, fails to teach at least this element.

The Examiner asserts, for example, that Paukshto teaches “an LCD panel (fig. 2 elements 101-107)”. Office Action, page 3. Contrary to the Examiner’s assertion, the cited portion of Paukshto corresponds to the front liquid crystal cell of an LCD shutter.

Paukshto, paragraph [0092]. Accordingly, Paukshto is silent at least to “an LCD panel,” as recited in claim 1.

Paukshto teaches a liquid crystal shutter device that is designed to switch between a light state and a dark state. Paukshto, paragraph [0075]. The shutter device is further designed to be used in protective eyewear that, for example, would be worn by welders. *Id.* at paragraph [0002]. Since the shutter is designed to filter external light sources, Paukshto fails to teach or suggest a “backlight source,” and “display[ing] an image,” as recited claim 1. Thus, Paukshto, fails to teach the claimed combination including “during a frame time controlling light from the backlight source to pass the regions in a display time that allows the LCD to display an image; and an LCD panel,” as recited in claim 1.

Nose fails to cure the above-noted deficiencies of Paukshto. Nose is relied upon by the Examiner for allegedly teaching “a backlight to provide illumination in a liquid crystal display.” Office Action, page 3. Nose teaches a liquid crystal display (see Fig. 5) comprising a backlight source 1, and transparent electrodes 4 and 6 which sandwich a liquid crystal layer 5. The display is designed such that an image can be displayed with greater brightness, and little or no parallax. Nose, paragraph [0018]. Nose however does not teach or suggest at least the element, “during a time frame *controlling light from the backlight source* to pass the regions in a display time that allows the LCD to display an image; and an LCD panel,” as recited in claim 1 (emphasis added).

Moreover, Applicant respectfully submits that there is insufficient motivation for combining the references in the manner that the Examiner is suggesting. Paukshto is directed primarily to the use of a liquid crystal shutter for the filtering of light for the

ocular protection of welders, and does not need or suggest a “backlight source,” or “display[ing] an image.” One of ordinary skill in the art would also not be reasonably motivated to incorporate “controlling a backlight source … in a display time,” into the device of Paukshto, which is essentially unconcerned with a backlight. The Examiner explains that “it would have been obvious to one of ordinary skill in the art to include a backlight in a liquid crystal display to provide illumination.” Office Action, page 3. Such motivation, however, is insufficient to satisfy the requirements of 35 U.S.C. § 103, because generalizations do not establish the realistic motivation to modify a specific reference in a specific manner to arrive at a specifically claimed invention. *In re Deuel*, 51 F.3d 1552, 34 USPQ2d 1210 (Fed. Cir. 1995).

Additionally, there is insufficient motivation for combining the references in the manner suggested by the Examiner because Paukshto and Nose are directed to non-analogous arts. Paukshto, as discussed *supra*, is directed to a liquid crystal shutter designed to filter external light for ocular protection. Nose, on the other hand, is directed towards liquid crystal displays. Since the references are directed to diverse and non-analogous arts, it would not have been obvious at the time the invention was made to have combined the teachings in a manner that would have resulted in the claimed invention. See M.P.E.P. §§ 2141.01(a), 2143.01. It is thus apparent that Examiner’s approach to the ultimate legal conclusion of obviousness amounts to a retrospective assessment as to how the claimed invention works and then combining unrelated references to arrive at the claimed invention, a reverse engineering that has been repeatedly judicially condemned. See *Uniroyal, Inc. v. Rudkin-Wiley Corp.*, 837 F.2d 1044, 5 USPQ2d 1434 (Fed. Cir. 1988). Absent such hindsight reasoning, one of

ordinary skill in the art would not have been motivated to combine the references in the manner suggested by the Examiner.

For at least the above reasons, Applicant respectfully submits that the Examiner has failed to establish a *prima facie* case of obviousness. Accordingly Applicant respectfully requests that the rejection of claim 1 under 35 U.S.C. § 103(a) be withdrawn.

Claims 2-5, and 7-8 depend from claim 1. Since Paukshto taken with Nose fails to teach each and every element of claim 1, the references also fail to teach each and every element required by the dependent claims. Accordingly, Applicant respectfully requests that the rejection of claims 2-5 and 7-8 under 35 U.S.C. § 103(a) be withdrawn.

Claim 6

Regarding the rejection of claim 6 under 35 U.S.C. § 103(a), claim 6 depends from claim 1. Since Paukshto taken with Nose fails to teach and every element of claim 1, that combination of references also fails to teach each and every element required by claim 6. Sakai fails to cure the above-noted deficiencies of Paukshto and Nose. That is, Sakai also fails to teach or suggest the claimed combination including, “during a time frame controlling light from the backlight source to pass the regions in a display time that allows the LCD to display an image; and an LCD panel,” as recited in claim 1, and required by dependent claim 6.

Sakai, cited for allegedly teaching “ferroelectric liquid crystal for faster response times,” (Office Action, page 6) teaches the use of a threshold value-free antiferroelectric liquid crystal composition for use in an active element driving liquid crystal system.

Sakai, e.g., col. 1, lines 4-8. Sakai, however, is silent to at least the element, “during a time frame *controlling light from the backlight source to pass the regions in a display time that allows the LCD to display an image; and an LCD panel,*” as recited in claim 1, and required by dependent claim 6.

Since the references, whether taken alone or in combination, fail to teach each and every element of the claim, a *prima facie* case has not been established. Accordingly, Applicant respectfully requests that the rejection of claim 6 under 35 U.S.C. § 103(a) be withdrawn.

Claims 9-10

Claim 9 recites a combination including, “a first electrode layer on the first substrate further comprising a *plurality of transparent electrodes* formed in parallel to each other.” Paukshto fails to teach at least this element.

As discussed above, Paukshto teaches a liquid crystal shutter device that is designed to switch between a light state and a dark state. Paukshto, paragraph [00]. The shutter device is further designed to be used in protective eyewear that, for example, would be worn by welders. *Id.* at paragraph [00]. The shutter device is comprised of electrode layers 103 (see Fig. 2), which, with aligning layers 104, 106, 112, and 114, sandwich liquid crystal layers 105 and 113, respectively. Paukshto, however, is silent to at least “a first electrode layer on the first substrate further comprising a plurality of transparent electrodes formed in parallel to each other,” as recited in claim 9.

Nose fails to cure the above-noted deficiencies of Paukshto. As discussed above, Nose is relied upon by the Examiner for allegedly teaching “a backlight to

provide illumination in a liquid crystal display." Office Action, page 3. Nose teaches a liquid crystal display (see Fig. 5) comprising a backlight source 1, and transparent electrodes 4 and 6 which sandwich a liquid crystal layer 5. Nose, however is silent to "a first electrode layer on the first substrate *further comprising a plurality of transparent electrodes formed in parallel to each other*," as recited in claim 9 (emphasis added).

Since Paukshto, whether taken alone or in combination with Nose, fails to teach each and every element of claim 9, a *prima facie* case of obviousness has not been established. Accordingly, Applicant respectfully requests that the rejection of claim 9 under 35 U.S.C. § 103(a) be withdrawn.

Claim 10 depends from claim 9, and thus requires all of the elements of claim 9. Since Paukshto taken with Nose fails to teach each and every element of claim 9, that combination of references also fails to teach each and every element required by dependent claim 10. Accordingly, Applicant respectfully requests that the rejection of claim 10 under 35 U.S.C. § 103(a) be withdrawn.

Claim 11

Regarding the rejection of claim 11 under 35 U.S.C. § 103(a), since claim 11 depends from claim 9, and Paukshto taken with Nose (see Footnote 1) fails to teach and every element of claim 9, that combination of references also fails to teach each and every element required by claim 11. Iida fails to cure the above-noted deficiencies of Paukshto and Nose. That is Iida also fails to teach or suggest the claimed combination including, "a first electrode layer on the first substrate further comprising a *plurality of transparent electrodes formed in parallel to each other*," as recited in claim 9, and required by dependent claim 11 (emphasis added).

Iida is cited for allegedly teaching “a color filter on array substrate to provide for color display.” Office Action, page 7. Iida is directed to the composition and method for producing a color filter, which may be used in a liquid crystal display device, which further has a transparent electrode film formed on the color filter. Iida, e.g., col. 2, lines 20-44. Iida is silent, however, to “a first electrode layer on the first substrate further comprising a plurality of transparent electrodes formed in parallel to each other,” as recited in claim 9, and required by dependent claim 11 (emphasis added).

Since Paukshto, whether taken alone, or in combination with Nose and Iida, fails to teach each and every element required by claim 11, a *prima facie* case of obviousness has not been established. Accordingly, Applicant respectfully requests that the rejection of claim 11 under 35 U.S.C. § 103(a) be withdrawn.

Claims 12-14

Claim 12 recites a combination including “a first electrode layer on the first substrate further comprising a plurality of transparent electrodes formed in parallel to each other” (emphasis added). Paukshto, whether taken alone, or in combination with Leibowitz, fails to teach or suggest at least this element.

The deficiencies of Paukshto have been noted above, with respect to claim 9. Leibowitz fails to cure these above-noted deficiencies. Leibowitz is cited for allegedly teaching a polarizer between the transparent electrode and the liquid crystal layer. Office Action, page 7. Leibowitz is directed to a twisted nematic liquid crystal display which may comprise conductive electrodes 6 and 8 (see Figure 2) and polarizer 30 which further acts as an alignment layer. Leibowitz, however, is silent to at least the element, “a first electrode layer on the first substrate further comprising a plurality of

transparent electrodes formed in parallel to each other," as recited in claim 12 (emphasis added).

Since Paukshto, whether taken alone, or in combination with Leibowitz fails to teach or suggest each and every element of claim 12, a *prima facie* case of obviousness has not been established. Accordingly, Applicant respectfully requests that the rejection of claim 12 under 35 U.S.C. § 103(a) be withdrawn.

Claims 13-14 depend from claim 12, and thus require all of the elements of claim 12. Since Paukshto taken with Leibowitz fails to teach each and every element of claim 12, that combination of references also fails to teach each and every element required by dependent claims 13-14. Accordingly, Applicant respectfully requests that the rejection of claims 13-14 under 35 U.S.C. § 103(a) be withdrawn.

Claim 15

Regarding the rejection of claim 15 under 35 U.S.C. § 103(a), since claim 15 depends from claim 12, and Paukshto taken with Leibowitz fails to teach and every element of claim 12, that combination of references also fails to teach each and every element required by dependent claim 15. Iida fails to cure the above-noted deficiencies of Paukshto and Nose. Iida is discussed above in reference to claim 11. Iida is silent to "a first electrode layer on the first substrate further comprising a *plurality of transparent electrodes formed in parallel to each other,"* as recited in claim 12, and required by dependent claim 15 (emphasis added).

Since Paukshto, whether taken alone, or in combination with Leibowitz and Iida, fails to teach each and every element required by claim 15, a *prima facie* case of

obviousness has not been established. Accordingly, Applicant respectfully requests that the rejection of claim 15 under 35 U.S.C. § 103(a) be withdrawn.

Claims 17-20

Claim 17 recites a combination including “providing … a first substrate … further comprising a plurality of transparent electrodes formed in parallel to each other.” Paukshto fails to teach at least this element.

As discussed above, Paukshto teaches a liquid crystal shutter device that is designed to switch between a light state and a dark state. Paukshto, paragraph [0075]. The shutter device is further designed to be used in protective eyewear that, for example, would be worn by welders. *Id.* at paragraph [0002]. The shutter device is comprised of electrode layers 103 (see Fig. 2), which with aligning layers 104, 106, 112, and 114, sandwich liquid crystal layers 105 and 113, respectively. Paukshto, however, is silent to at least “providing … a first substrate … further comprising a plurality of transparent electrodes formed in parallel to each other,” as recited in claim 17.

Nose fails to cure the above-noted deficiencies of Paukshto. The deficiencies of Nose have been discussed above at least in regard to claim 9. Nose is silent to “providing … a first substrate … further comprising a plurality of transparent electrodes formed in parallel to each other,” as recited in claim 17.

Since the references, whether taken alone or in combination, fail to teach each and every element of claim 17, a *prima facie* case of obviousness has not been established. Accordingly, Applicant respectfully requests that the rejection of claim 17 under 35 U.S.C. § 103(a) be withdrawn.

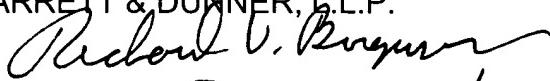
Claims 18-20 depend from claim 17, and thus requires all of the elements of claim 17. Since Paukshto taken with Nose fails to teach each and every element of claim 17, that combination of references also fails to teach each and every element required by dependent claims 18-20. Accordingly, Applicant respectfully requests that the rejection of claims 18-20 under 35 U.S.C. § 103(a) be withdrawn.

In view of the foregoing amendments and remarks, Applicant respectfully requests reconsideration and reexamination of this application and the timely allowance of the pending claims.

Please grant any extensions of time required to enter this response and charge any additional required fees to our deposit account 06-0916.

Respectfully submitted,

FINNEGAN, HENDERSON, FARABOW,
GARRETT & DUNNER, L.L.P.



Dated: June 9, 2005

By:


Richard V. Burgujian
Reg. No. 31,744

Attachments: Replacement Drawings, Figures 1-5B

AMENDMENTS TO THE DRAWINGS:

The attached sheets of replacement drawings are incorporated to replace as-filed Figures 1-5B.

Attachments: Six (6) Replacement Sheets corresponding to Figures 1-5B